UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,061	03/21/2006	Raanan Ben-Horin	7031P017	6568

8791 7590 02/04/2008

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
ANDERSON, DENISE R	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
02/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,061	BEN-HORIN, RAANAN	
	Examiner	Art Unit	
	DENISE R. ANDERSON	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 March 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

2. Applicant amended the specification and Figure 2 to identify the piston assembly 128. Unfortunately, the amended figure did not reach the examiner. The drawings continue to be objected to under 37 CFR 1.83(a) since the drawings must show every feature of the invention specified in the claims. No new matter should be entered.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure was amended such that the previous objection is withdrawn.

Claim Objections

5. Claim 1 was amended such that the previous objection is withdrawn.

Claim Rejections - 35 USC § 103

6. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadan et al. (US Patent No. 6,398,037 B1). An element-by-element matching of the claim limitations to the prior art is shown below. The claims appear in italics and the prior art and examiner's comments are in normal font.

Claim 1 (Currently Amended): A liquid filtering device, particularly for irrigation water installations (Sadan et al., Column 1, lines 5-7) *comprising:*

a housing (112, 114) (Sadan et al., Figures 1 and 10, two-member housing 12 and 14) *with an inlet port (120)* (Sadan et al., Figure 1, inlet port 16 and Figure 10, reference part 20) *and an outlet port (116)* (Sadan et al., Figure 1, outlet port 20; Figure 10, designated by arrow at bottom of part)*;*

a core member (124) (Sadan et al., Figures 1 and 10, core member 24) *centrally mounted within the housing comprising at one axial end thereof an abutment ring (138)* (Sadan et al., Figure 1, mounted screw-threaded ring 38) *associated with a male screw-thread for mounting the core member (124) to the housing (114) next to and in communication with the inlet port (120);*

a discs-type filter member (170) (Sadan et al., Figures 1 and 10, filter disks battery 70) *supported by the core-member (124) so that water flowing from the inlet port (120) enters the filter member in a radial direction, and is discharged through the outlet port (116), and vice-versa during reversed, filter flushing flow cycles;*

a piston assembly (140) (Sadan et al., Figure 1, piston assembly 28) *mounted to the core member (124) comprising a piston (158)* (Sadan et al., Figure 1, piston 58) *and a displaceable member (160)* (Sadan et al., Figure 1, coil spring 52) *coupled to the piston and abutting against the filter member at the other axial side thereof;*

wherein the mounting of the core member (124) comprises a female screw-threaded split ring (202) (Sadan et al., Figure 1, the female thread area of ring 82; Clark et al., Figures 1 and 2, nut body portion 3 and ring portion 4) *matching the male screw-thread; and*

a circular convergent cone shaped trough (200b) (Sadan et al., Figure 1, mounted fitting 80 and ring 82 minus the female thread area; Clark et al.,

Figures 1 and 2, collar 6) *encompassing the split ring and fixedly mounted to the housing, the arrangement being such that upon threading together, the split-ring is attracted towards the abutment ring (138)* (Sadan et al., Figure 1, flange 36; Clark et al., Figures 1 and 2, flange 2) *and thus becomes self-tightened against the cone-shaped wall of the trough.*

Sadan et al. discloses the claimed invention except that the split ring and the trough are integral and applicant makes them separable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the split ring and the trough separable, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Sadan et al. discloses the claimed invention except that the trough sides are perpendicular instead of slanted slightly inwards. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. trough sides slant in slightly as opposed to making them perpendicular since the two designs are equivalent.

Claim 5 (Currently Amended): The device as claimed in claim 1, wherein the piston assembly is provided with means for limiting the progress amount of the piston.

Sadan et al. discloses or suggests all claim 1 limitations and further teaches a means for limiting the progress amount of the piston in the form of a spring 52 in Figure 1.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadan et al. (US Patent No. 6,398,037 B1), in view of Clark et al. (US Patent No. 3,515,415).

8. With regards to independent claim 1, it was rejected above under 103(a) over Sadan et al. where the Sadan et al. split ring was integral to the trough. Claim 1 can also be rejected under 103(a) over Sadan et al., in view of Clark et al., where Clark et al. teaches the separable split ring and trough of applicant. See above where the claim 1 limitations are matched to the prior art, element-by-element. In summary, Sadan et al. discloses the claimed invention except that the split ring and trough are integrated, as opposed to separable. Clark et al. teaches the separable split ring and trough. Clark et al., Figures 1 and 2, where the split ring is nut body portion 3 and ring portion 4 – and the trough is collar 6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. split ring and trough separable as taught by Clark et al., since Clark et al. states at Column 1, lines 32-44, that such a modification provides a way to join two pipe-like structures, like the recited inlet port and filter of claim 1.

9. With regards to dependent claims 2-5, the claims appear below in italics and the prior art and examiner's comments are in normal font.

Claim 2 (Currently Amended): The device as claimed in claim 1, wherein said trough is open at at-least one side thereof allowing the split ring to be inserted thereinto by elastically squeezing same into a smaller diameter.

Sadan et al. discloses or suggests all claim 1 limitations but does not teach the split ring that can be elastically deformed. Clark et al. teaches such a split ring in Figures 1 and 2, nut body portion 3 and ring portion 4. It would have been obvious to one having ordinary skill in the art at the time the invention was made to, in the Sadan et al. device, have joined the core member to the housing using a split ring that could be elastically deformed as taught by Clark et al., since Clark et al. states at Column 2 lines 13-16 that such a modification would allow the split ring to be deformed during placement into position and then allow the split ring to "automatically return" to the undeformed state when the core member and housing are threaded together.

Claim 3. The device as claimed in claim 2 wherein the said trough is integrally formed with a fitting communicating the core member with the inlet port of the filter member.

Sadan et al., in view of Clark et al., discloses or suggests all claim 2 limitations and, in Figure 10, further teaches that the inlet port 20 communicates with the core member (Figure 1, core member 24) through a fitting.

Claim 4 (Currently Amended): The device as claimed in claim 3, wherein a stop is provided within the trough for avoiding free rotation of the split ring.

Sadan et al., in view of Clark et al., discloses or suggests all claim 3 limitations. In Figure 1, Clark et al. further teaches a stop to avoid the free rotation of the split ring in the form of a "collar 6." The "collar 6" slides over the "ring portion 4" and is "held there by friction." "Thereafter, threads 7 and 5 are engaged in the usual manner. Collar 6 now holds the nut [applicant's split ring] in a fixed circular configuration." Clark et al., Column 2, lines 23-27. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included a stop in the Sadan et al. device, as taught by Clark et al., since Clark et al. states at Column 2, lines 26-27 that such a modification would "hold the nut (applicant's split ring) in a fixed circular configuration," i.e. avoid the free rotation of the split ring. In summary, Sadan et al., in view of Clark et al., discloses or suggests all claim 4 limitations.

Claim 5 (Currently Amended): The device as claimed in claim 1, wherein the piston assembly is provided with means for limiting the progress amount of the piston.

Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations and further teaches a means for limiting the progress amount of the piston in the form of a spring 52 in Figure 1.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sadan et al. (US Patent No. 6,398,037 B1), in view of Clark et al. (US Patent No. 3,515,415) as applied to claim 5 above, and further in view of Orberg et al. (Erik Orberg et al., "26th Edition Machinery's Handbook," pub. Industrial Press Inc., New York, 2000, of particular relevance is the example shown, starting on page 300). The claim appears below in italics with the prior art and examiner's comments in normal font.

Claim 6 (Currently Amended): The device as claimed in claim 5, wherein said means comprise a coil spring, the number and size of the coils being designed so as to limit the stroke of the piston following a predetermined compression thereof.

Sadan et al., in view of Clark, discloses or suggests all claim 5 limitations. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the spring to limit the stroke of the piston since it was known in the art how to design springs to compress a given length when under a given load. Orberg et al. provides such an example, starting on page 300. The spring is to compress from 2-1/2 inches to 1-1/4 inches under a 36-pound load. The number and size of coils in the spring is determined.

11. Applicant cancelled claims 7-8.

Response to Arguments

12. Applicant's arguments filed December 21, 2007 have been fully considered but they are not persuasive. Applicant's arguments with the examiner's response are listed below.

a. Applicant argues that Sadan et al. does not teach a separable split-ring and the reference must teach this limitation because a separable split-ring "operates completely different from a ring that is not split." The examiner responds that the Sadan et al.'s integral split-ring and trough operates the same as applicant's separable split-ring and trough. It would have been obvious to one of ordinary skill in the art at the time the invention was made, in the Sadan et al. device, to have made the split ring and the trough separable, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

b. Applicant argues that Sadan et al. does not teach the core member, the split ring, the trough, or the abutment ring. The examiner's response is that Sadan et al. teaches the core member (Sadan et al., Figures 1 and 10, core member 24), the split ring (Sadan et al., Figure 1, the female thread area of ring 82), the trough (Sadan et al., Figure 1, mounted fitting 80 and ring 82 minus the female thread area), and the abutment ring (Sadan et al., Figure 1, flange 36).

c. Applicant argues that Sadan et al., in view of Clark et al., does not teach the core member, the split ring, the trough, or the abutment ring. The examiner's response is that Sadan et al., in view of Clark et al., teaches the core member

(Sadan et al., Figures 1 and 10, core member 24), the split ring (Sadan et al., Figure 1, the female thread area of ring 82; Clark et al., Figures 1 and 2, nut body portion 3 and ring portion 4), the trough (Sadan et al., Figure 1, mounted fitting 80 and ring 82 minus the female thread area; Clark et al., Figures 1 and 2, collar 6), and the abutment ring (Sadan et al., Figure 1, flange 36; Clark et al., Figures 1 and 2, flange 2).

d. Applicant argues that Sadan et al., in view of Clark et al., cannot be combined to disclose or suggest all the limitations of claim 1. Examiner's response is that Sadan et al. discloses the claimed invention except that the split ring and trough are integrated, as opposed to separable. Clark et al. teaches the separable split ring and trough. Clark et al., Figures 1 and 2, where the split ring is nut body portion 3 and ring portion 4 – and the trough is collar 6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. split ring and trough separable as taught by Clark et al., since Clark et al. states at Column 1, lines 32-44, that such a modification provides a way to join two pipe-like structures, like the recited inlet port and filter of claim 1.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise R. Anderson whose telephone number is 571-270-3166. The examiner can normally be reached on Monday through Thursday, from 8:00 am to 6:00 pm.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter D. Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
David Sample
Supervisory Patent Examiner,
Art Unit 1797

DRA